[135] China has sianificant deposits of tin and produced in the 1930's between 3 and 4 per cent of the world's tin ore. It is mined in the southwest tableland of Yünnan and Kwangsi, and in the hills which form the divide between the Hsi and Hsiang River basins (in Kwangsi and Hunan), but no tin was smelted anywhere in China until 1932, when a small plant was established at the largest Chinese mine in Yünnan. The ore, and the small amount of smelted tin were almost entirely exported. China before 1937 was the leading world producer of both tungsten and antimony, and Shanghai was able to fill its own small needs for these alloys entirely from domestic sources. Both ores were mined predominantly in the basins of the Hsiang and Yüan Rivers in Hunan, and over 90 per cent of the total production of both ores was exported, nearly all of it through Shanghai.

Hides for the leather industry in Shanghai, and for export, came to the city, in order of importance, from Manchuria by sea, Tientsin (which acted as the main collecting center for hides from the grazing lands of northwest China) by sea, Shantung (Tsingtao and Tsinan) by both sea and rail, and from Hankow (collecting center for the hides of central China) and Szechuan via the Yangtze. Hides from Kiangsu and Chekiang were considered greatly inferior as well as being very limited in quantity in this animal-poor area of intensive hand agriculture, and accounted for less than 3 per cent of Shanghai's total supply.[29] Rubber was of course entirely imported.

Shanghai's wood-working, furniture, and paper industries were almost entirely dependent on imported wood from Canada, the United States, and Scandinavia. The delta area produces no wood at all, and the nearest commercially usable stands are in the hills along the Chientang River south and west of Hangchow, but they are small and of poor quality. About one-tenth of the quantity of foreign imports came in by junk from south China, particularly from Foochow, the lumber center of the China coast by virtue of the heavily wooded slopes of the Wu Yi and Ta Yü ranges, too steep for agriculture and not crossed by any important transport routes.[30]

The two leading chemical industries, soap and matches, provide in the sources of their raw materials an illustration of Shanghai's position as a manufacturing center in an otherwise pre-industrial economy. There were about fifty soap factories in Shanghai in the

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1930's, or about half of the large-scale mechanized soap factories in China. They drew 90 per cent of their raw materials from domestic sources. Lye (potash) was obtainable from plants in Shanghai. Vegetable tallow and vegetable oils (most importantly, cotton, peanut, rape seed, sesamum seed, and castor) came to the city via the Yangtze system from the major producing areas of central China.[31] The fruit of the tallow tree is gathered in central China in October and the oil pressed out during the winter, but it is not marketed in Hankow and sent to Shanghai until the spring rise of the waterways leading to Hankow makes easy navigation possible. A dry spring makes the market soar in both Hankow and Shanghai.[32]

The average Shanghai price before the war was nevertheless substantially below that of foreign vegetable oil imports (despite the production of coconut oil in southeast Asia). Vegetable wax from central China also largely replaced foreign imports of paraffin wax after 1930, when the *likin* (internal customs tax) was abolished by the Kuomintang government. The cheapness of domestic tallow, oils, and wax in Shanghai relative to seaborne foreign imports was clearly related to the use of inland water transport in bringing these products to the city. The fact that 80 per cent of Shanghai's soap production in the early 1930's was marketed outside Kiangsu also suggests that the city's water connections with its hinterland were basic in locating the industry there. Only 10 per cent of the Shanghai soap industry's raw materials were imported, largely coconut and olive oils for making especially high-quality soap for the domestic market.[33]

By contrast, the Shanghai match industry was almost entirely dependent on overseas sources for its raw materials. It imported all of its sulphur (largely from Japan), all of its paper and cardboard (from Sweden), and all of its match-making machinery (from Japan). Most of its phosphorous was also imported, but some was produced locally from animal bones. Ample sulphuric acid was produced in Shanghai. For this product of such high unit-value by weight, raw materials to which so much value was added by manufacture could economically be imported, and the finished matches were marketed in every province of China.[34] Shanghai was never-